

Integrated Optical Engine for Rugged, Compact, Inexpensive Airborne Fiber Sensor Interrogators, Phase I

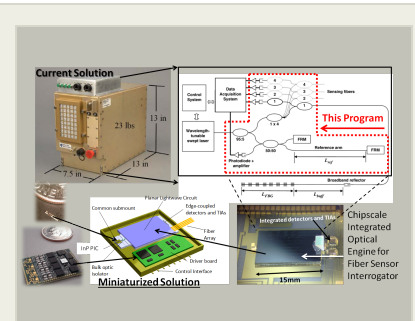
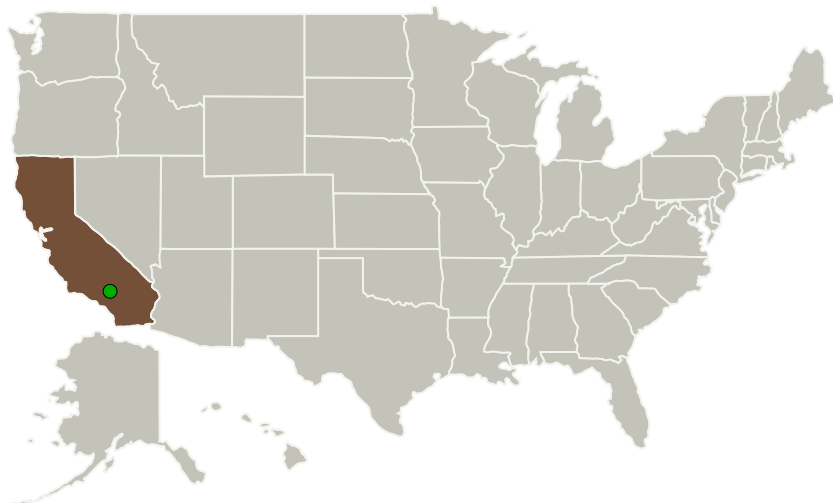
Completed Technology Project (2015 - 2015)



Project Introduction

In this program, we are proposing to develop a key optical element that is of interest for enabling next generation of miniaturized, low-cost NASA's FOSS interrogator systems. Through innovative photonic integration of key functions, the size and cost of the existing system will be reduced by an order of magnitude. This, in turn, will fulfill one of the key requirements of the solicitation, yielding a miniaturized fiber optic measurement system with low power suitable for migration to into platforms spanning from rockets, to small business class jets or UAS platforms.

Primary U.S. Work Locations and Key Partners



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Table of Contents

Project Introduction	1
Primary U.S. Work Locations and Key Partners	1
Project Transitions	2
Images	2
Organizational Responsibility	2
Project Management	2
Technology Maturity (TRL)	2
Technology Areas	3
Target Destinations	3

Organizations Performing Work	Role	Type	Location
Freedom Photonics, LLC	Lead Organization	Industry	Santa Barbara, California
● Armstrong Flight Research Center(AFRC)	Supporting Organization	NASA Center	Edwards, California

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Primary U.S. Work Locations

California

Project Transitions

June 2015: Project Start

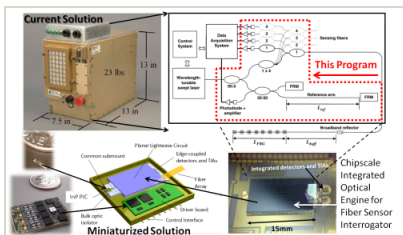
December 2015: Closed out

Closeout Summary: Integrated optical engine for rugged, compact, inexpensive airborne fiber sensor interrogators, Phase I Project Image

Closeout Documentation:

- Final Summary Chart Image(<https://techport.nasa.gov/file/139128>)

Images



Briefing Chart Image

Integrated optical engine for rugged, compact, inexpensive airborne fiber sensor interrogators, Phase I
(<https://techport.nasa.gov/image/128537>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Freedom Photonics, LLC

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

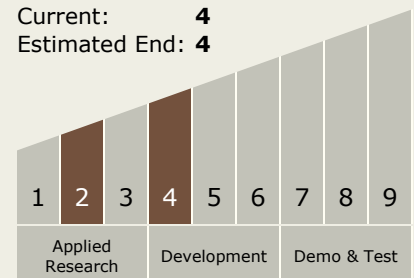
Carlos Torrez

Principal Investigator:

Milan Mashanovitch

Technology Maturity (TRL)

Start: 2
Current: 4
Estimated End: 4



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Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.3 In-Situ Instruments and Sensors
 - └ TX08.3.4 Environment Sensors

Target Destinations

The Moon, Mars, Outside the Solar System, The Sun, Earth, Others Inside the Solar System